Project Manager
mbined Arms Tactical Trainers

Advance Program
Briefing to Industry

Kevin S. Noonan
Project Manager

Project Manager Combined Arms Tactical Trainers

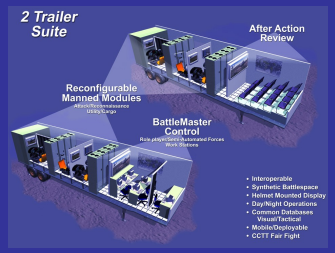
Mission

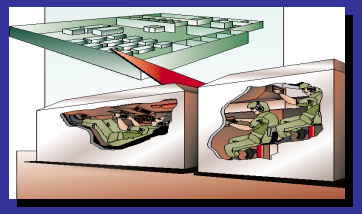
Acquire, Field, and Life Cycle Manage the Virtual Synthetic Environment and Training Aids, Devices, Simulators, and Simulations (TADSS) to Support Individual, Institutional, and Collective Training Requirements for the Objective Force.

PM CATT Organization

Virtual Simulation
Today → Tomorrow

Collective/Combined Arms/Specialty Tasks

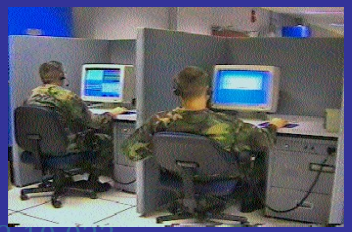


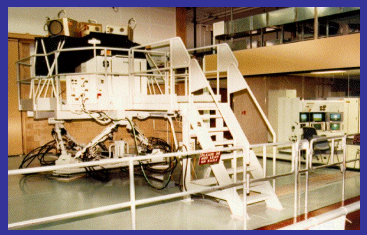


Embed In Tactical Systems

Seamless Interfaces Across Virtual, Constructive & Live

Specialty and Focused Training Tasks





PM CATT Focus Areas

- Interoperability Design and Solutions
- Visual Systems - Smaller, Faster, Cheap
  - Helmet Mounted Display Technologi
- Embedded Technologies and Concepts
- Semi-Automated Force Capabilities
- Rapid Database Generation and Updati
- Cross-Domain, Multi-Service and Joint

--- Additional Information --- Project Discussion Opportunities

Purpose: Provide Forum For Additional Discussion And Responses to Areas of Specific Interest

Location: PEO STRI/Research Commons; Room 4072

For Attendance Contact: Jane Knapp, (407) 384-3601

When: Friday, 13 June 2003; Times as Indicated

APM CCTT 0800-0900APM STS 0900-1000
APM ACTT 1000-1100PM GCTT 1100-1200

Contracting Opportunities
- Program Outline -

APM CCTT - MAJ Lee Dunlap, APM, Soldier

- Soldier – Combined Arms Tactical Trainer
- Close Combat Tactical Trainer (CCTT)
- Synthetic Environment (SE) Core

PM STS - Tom Smith, APM STS, (Acting)

- Special Operations Forces Air Ground Interface Simulator (SAGIS)
- MH-47G/MH-60M Combat Mission Simulator (CMS)
- Light Assault/Attack Reconfigurable (LASAR)

Contracting Opportunities
- Program Outline -

GCTT - LTC Joe Giunta, Product Manager

- Common Driver Training Systems (CDTS)
- Virtual Emergency Response Training System
- Basic Electronic Maintenance Trainer (BEMT)

PM ACTT - Jean Burmester, DPM ACTT (Act

- Additional Blackhawk Flight Simulators (ABH
- AH-64 Combat Mission Simulator Follow-on P
- SATCOM Principles Transformation Trainer (S
- Advanced Morse Mission Trainer (AMMT)
- Aviation Combined Arms Tactical Trainer (AV

PM CATT

Contracting Opportunities

Assistant Project Manager (APM) Close Combat Tactical Trainer (CCTT)

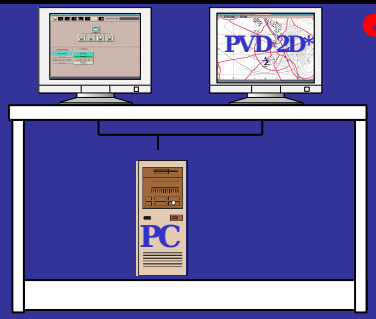
Mission: Provide Focused Management of the Close Combat Tactical Trainer (CCTT) Program To Meet Program Cost, Schedule, and Performance Requirements and to Produce a Reusable Synthetic Environment For Future CATT and Other Virtual Training Systems

Soldier - Combined Arms Tactical Trainer (Soldier CATT)

Soldier-CATT will provide a dismount-centric, combined arms, collective training capability to prepare soldiers and leaders to fight effectively throughout the full spectrum of military operations in the

Soldier - Combined Arms Tactical Trainer (Soldier CATT)

Semi-Automated Forces Workstations



Live Battalion/Squadron TOC

Terrain Databases

- ✓Kosovo
- ✓Central Germany
- ✓NTC
- ✓Ft Hood
- ✓Korea
- ✓Grafenfels
- ✓Ft Riley (funded)
- ✓ (Terrain DBs already available in CCTT)
- •Urban Operations
- •SBCT Home Stations
- •JRTC
- •Infantry, Ranger, SOF Home Stations
- •Caspian Sea

Soldier-Leader Simulator "Virtual Warrior"

Reconfigurable Vehicle Simulators

Gunner positions added for MGS and ATGM

Multifunctional Reconfigurable Workstations

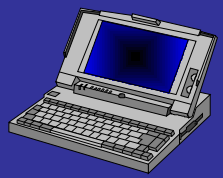
Master Control Console/ AAR Workstations

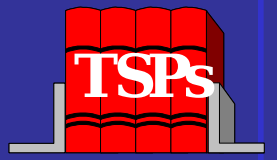
3-D VISUALIZATION

Exercise Initialization Files

Rapid Structured Offsite Scenario Development

Exercise Development





CITT*

*CITT - Commander's Integrated Training Tool

Soldier - Combined Arms Tactical Trainer (Soldier CATT)

Description/Requirement

What We Have

Prototype Virtual Warrior

Prototype Reconfigurable Desktop

What We Need

Immersive, Combined Arms Virtual Environment

Complex MOUT Representation

Interoperability with Other Simulation Systems

Portable, Self-

Soldier - Combined Arms Tactical Trainer (Soldier CATT)

Acquisition Strategy

- Development with Production Follow-On

- Unique Solicitation Requirements
  - Reuse of OneSAF & Virtual Databases
  - Integration of Land Warrior
  - Portable system; No fixed facilities
  - Interoperability (Live, Virtual, & Constructive)

- Potential Component Breakout

Contract: TBD

Value: > $200M

RFP: 4QFY05

CA: 1QFY06

Close Combat Tactical Trainer

CCTT is the first member of the Combined Arms Tactical Trainer (CATT) family of virtual, distributed interactive simulations (DIS) for collective training. It supports the training of Armor, Mechanized Infantry, and Cavalry units

Close Combat Tactical Trainer

Description/Requirement

What We Have

Fixed and Mobile CCTT Sites

Operational System in Production And Support

What We Need

Updated Image Generator System (STOC Competition On-Going)

Weapon System Concurrency

Reconfigurable HMMWV

Close Combat Tactical Trainer

Acquisition Strategy

- CCTT Production Contract (LMIS)
  - E-DIMM, Enhanced AAR, Digitization
- CCTT Image Generator Upgrade
  - RFP released April 03
  - Award planned NLT Jan 04
- CCTT Interface to Air Force Simulations
- Live-Virtual-Constructive Simulation Interoperability
- Reconfigurable HMMWV to Support Variant Configurations

Contract: STC

Value: > $200

RFP: Multiple

CA: Multiple Awards

Synthetic Environment (SE) Core

Enables the Army's Common Virtual Environment (CVE) to link virtual training simulations into an integrated and interoperable training system with fair fight capability for Legacy, Interim, and Objective Forces; enables linkage of the CVE to

Synthetic Environment (SE) C

Description/Requirement

What We Have

CATT family of Virtual Simulation Databases

CATT family of Virtual Training Support Packages

What We Need

Integration of OneSAF into All Virtual Simulations

Common, Rapid Terrain Database Generation Process

Common TSPs for Virtual Training

Interoperability With Live and Constructive Simulations

Synthetic Environment (SE) C

Acquisition Strategy

FY05 – STOC Contracts

- **Common Database Generation Process**
- **OneSAF Integration into Virtual Sims**
- **Cross Domain Interoperability**
- **Common Training Support Packages**

FY06 – STOC Contracts

- **Long Haul Connectivity**

Contract: STC

Value: $120M

RFP: Multiple

CA: Multiple

Assistant Project Manager

SOF Training Systems

Develop, Field, and Sustain High Quality

Virtual Training Devices for

Special Operations Forces that Meet

Special Operations Forces Air Ground Interface Simulator (SAGIS)

Training capabilities for CAS, call for fire, terminal attack control, forward observation, air traffic control and support battlefield air interdiction missions in both conventional and tactical

Special Operations Forces Air Ground Interface Simulator (SAGIS)

Description/Requirement

What We Have:

Currently there is no simulator which meets the requirements defined within the USSOCOM approved Joint Operational Requirements Document (JORD) dated OCT 2002

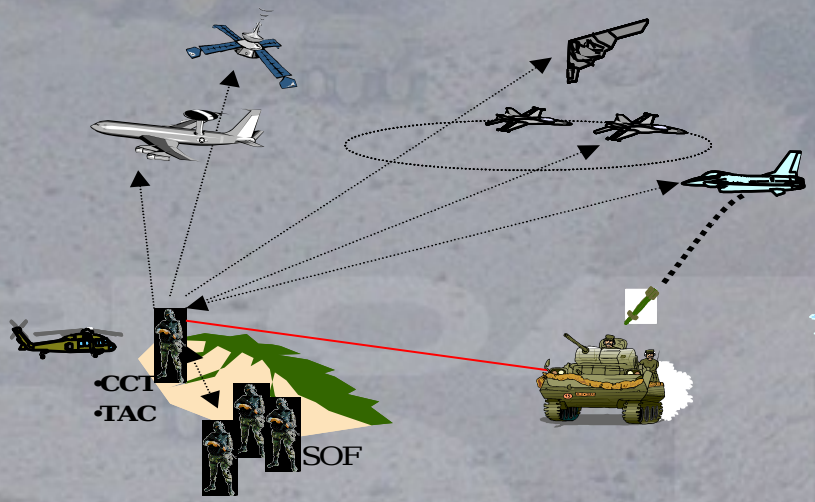
What We Need:

A training solution which provides the SOF Warfighter with the required fidelity to perform Close Air Support (CAS) from multiple services and delivery platforms.

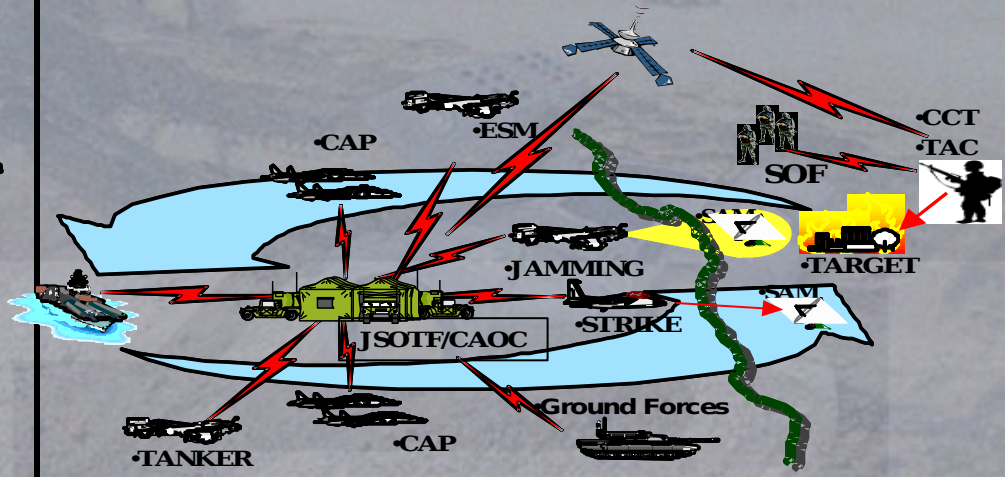
----- SAGIS -----

Operational Concept

Air Traffic Control – in and out of a tower setting



Terminal Attack Control



Mission Rehearsal

Special Operations Forces Air Ground Interface Simulator (SAGIS)

Acquisition Strategy

- The SOF Requirements Analysis, Prototyping, Training, Operations and Rehearsal (RAPTOR) contract through NLX, Inc. will be utilized for the integration of systems into the SAGIS (18 Month Contract Effort).

- NLX will sub-contract for Initial Prototype “Fixed base” and “Deployable” simulators

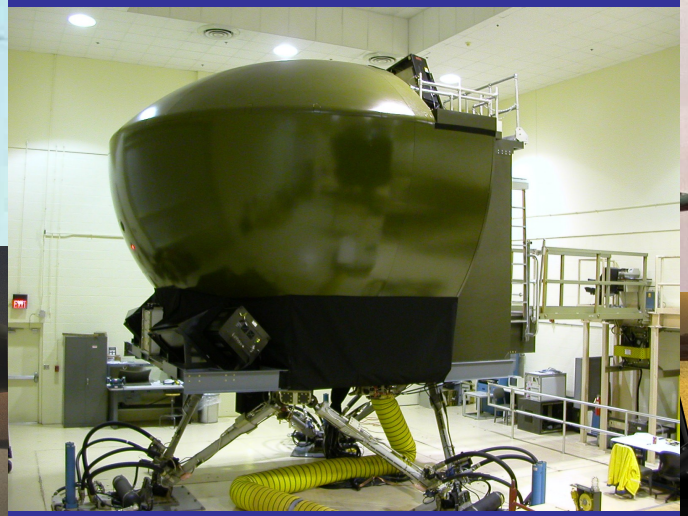
Contract:
NLX

Value: $7-9M

RFP: 1QFY04

Award:
1QFY04

MH-47G/MH-60M Combat Mission Simulators



High-fidelity full motion flight simulator with Out-the-window scene supporting aircraft field-of-view. Mission Rehearsal environment operating on a Common Database. Correlated sensor simulation, and threat and environmental models. Common Avionics Architecture System (CAAS)

MH-47G/MH-60M Combat Mission Simulators

Description/Requirement

What We Have:

Currently there is no simulator which meets the requirements for conducting Mission Rehearsal using the MH-47G/MH-60M aircraft.

What We Need:

A training solution which provides the required fidelity to perform Mission Rehearsal using MH-47G/MH-60M

MH-47G/MH-60M Combat Mission Simulators

Operational Concept

The Desk Top Trainer (DTT) will provide initial training support as well as a deployable currency/refresher training capability for all paging actions in the Multifunction Display (MFD) and Central Display Unit (CDU).

The Part Task Trainer (PTT) will provide integrated cockpit training for the CAAS cockpit relieving training time from the aircraft and CMS.

The CMS will provide full fidelity day, night and

MH-47G/MH-60M Combat Mission Simulators

Acquisition Strategy

- Delivery Order under STOC
- MH-47G/MH-60M Training System Procurement
- Effort is to be completed within 30

Contract: STO

Value: $75M

RFP: 3QFY03

Contract: 1QFY
Award

AH/MH-6 Light Assault/Attack

Modify AH/MH-6 Light Assault/Attack Reconfigurable (LASAR) CMS Phase I simulator for DIS/HLA compliance (Interoperability within 160th SOAR(A)/USSOCOM), complete tactical environment for training and Mission Rehearsal, and provide unrestricted field of regard with

AH/MH-6 Light Assault/Attack Reconfigurable CMS Phase II

Description/Requirement

What We Have:

LASAR Phase I System which does not meet the requirements for conducting full Mission Rehearsal using the AH/MH-6 aircraft.

What We Need:

An upgrade to LASAR Phase I which provides the required fidelity to perform full Mission Rehearsal using

AH/MH-6 Light Assault/Attack Reconfigurable CMS

Acquisition Strategy Phase II

- Option Award Under Existing Contract or New Delivery Order under STOC
- Phase I as GFE
- Effort is to be completed within 24 months after contract award

Contract: STOC

Value: $9-12M

RFP: 1QFY06

CA: 2QFY06

Product Manager Air and Command Tactical Trainers

PM ACTT

"Soldiers - The Bottom Line"

Develop, Field, and Sustain High Quality Airborne and Command Virtual Training Devices that Meet

Additional Black Hawk Flight Simulators (ABHFS)

Develop and provide 3 additional high fidelity UH-60A/L flight simulators, one each for Fort Drum, Eastern Army National Guard Aviation Training Site (EAATS) and Western Army National Guard Aviation Training Site

Additional Black Hawk Flight Simulators (ABHFS)

Description/Requirement

What We Have

Existing Lift Simulator Modernization Program (LSMP) Simulators and Software Baseline

What We Need

Three Additional High Fidelity UH-60A/L Flight Simulators

Additional Black Hawk Flight Simulators (ABHFS)

Simulator Characteristics

- High fidelity flight models and flight controls
- High Level Architecture (HLA)/Distributed Intera
  Simulation (DIS) compliant
- Design basis aircraft avionics concurrency
- Cross-cockpit viewing
- Portable Flight Planning Software (PFPS) integra
- Semi Automated Forces (SAF) capability (Objectiv
- Site specific Instrument Flight Rules (IFR) terrai
- Training debrief capability

Additional Black Hawk Flight Simulators (ABHFS)

Acquisition Strategy

Competitive Virtual Domain PEO STRI Omnibus Contract Award

LSMP Software Will be Provided When Available to Support Contract Execution

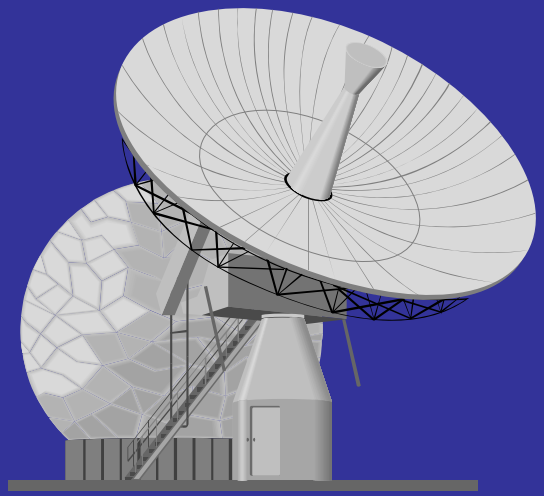
Contract: STOC

Value: $37.5M

Award: 4QFY03

RFT: 30 MAC

SATCOM Principles Transformation Trainer (SPTT)



Provide a Defense Satellite Communication (SATCOM) Training Device to meet or exceed U.S. Army Signal School as well as the Objective Force Communication Training requirements. Trains Army (MOS 31S), Air Force, Navy & Marine Corps SATCOM Operators & Maintenance personnel. Computer based training device that emulates a SATCOM trainer networked to

SATCOM Principles Transformation Trainer (SPTT)

Description/Requirement

What We Have:

SPTT composed of 3 obsolete training suites. Two of the suites simulate equipment that is no longer in the U.S. Army inventory. Maintenance support has become a major problem due to

What We Need:

A major upgrade of the SPTT to include the incorporation of the latest computer and simulator technology that simulates fundamental tasks required of the MOS

SATCOM Principles Transformation Trainer (SPTT)

Acquisition Strategy

Front End Analysis to be performed in FY04

Competitive Virtual Domain PEO STRI Omnibus Contract (STOC) Award

Scope Includes R&D and Production

Contract: STOC

Value: $10-20M

RFP: 4QFY04

CA: 1QFY05

Advanced Morse Mission Trainer (AMMT)

Provide a Morse Mission Training System to meet or exceed U.S. Army Intelligence School requirements. Trains Army (MOS 98H), Air Force, Navy & Marine Corps Morse Intercept Operators. Computer based training device that emulates the Common

Advanced Morse Mission Trainer (AMMT)

Description/Requirement

What We Have:

Current Morse Mission Trainer (MMT) is an obsolete device that is not capable of simulating the full range of current intelligence collection activities. Current device is fast becoming logistically

What We Need:

A major upgrade of the AMMT to include the incorporation of the latest in computer and simulator technology that simulates the fundamental tasks required of the MOS 98H students

Advanced Morse Mission Trainer (AMMT)

Acquisition Strategy

Front End Analysis to be Performed in FY04 Will Establish Acquisition Strategy

Anticipate Competitive Award Under the PEO STRI Omnibus Contract (STOC)

Contract: STO

Value: $5-10M

RFP: 4QFY04

CA: 1QFY05

AH-64 Combat Mission Simulator (CMS) Follow-on

The AH64 CMS is a high fidelity Combat Mission Simulator (CMS) for the AH-64A attack helicopter. It is a full mission simulator which will permit the training and practice of a high percentage of aircraft and mission tasks, weapons delivery, normal and emergency procedures, sensor systems

AH-64 Combat Mission Simulator (CMS) Follow-on

Description/Requirement

What We Have:

The AH-64 Combat Mission Simulator provides transition and refresher training of experienced aviators in nap-of-the-earth (NOE) flight, masking/unmasking, engagement techniques, weapons

What We Need:

More System Upgrades

The system enables Apache crews to develop tactical decision making skills during realistic mission scenarios in a high threat environment against interactive targets.

AH-64 Combat Mission Simulator (CMS) Follow-on

Acquisition Strategy

Existing Contract with Northrup-Grumman Mission Systems – CAE Link (NGMS-CAE) Provides Priced Options for Five Additional Upgrades.

May Execute By Competitive PEO STRI Omnibus Contract (STOC) Award Depending on

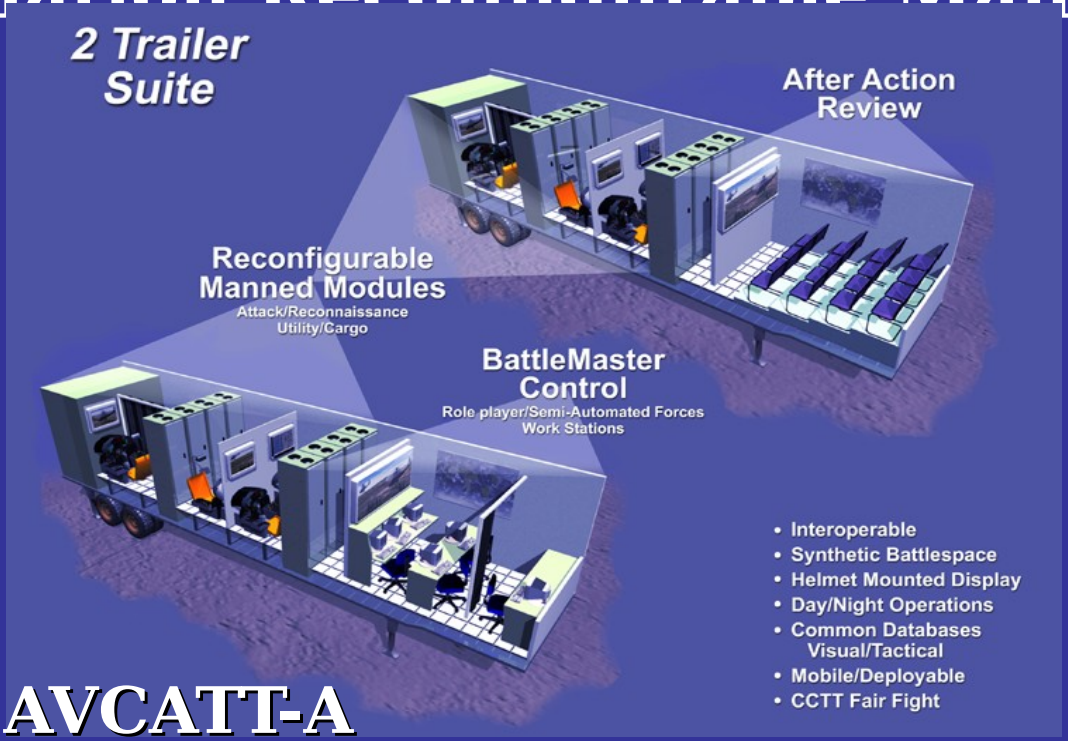
Contract: NGMS-CAE or STOC

Value: $ 4-16M

RFP: 4QFY03

Option: 1QFY04 Award

Aviation Combined Arms Tactical Trainer – Aviation Reconfigurable Manned



AVCATT-A

Combined arms collective training and mission rehearsal system operating in a simulated battlefield. Affordable and enhanced capability to train for joint air/ground arms operations. Supports institutional, organizational, and

AVCATT-A

Description/Requirement

What We Have:

- **Baseline AVCATT-A System In Production (L3COM)**
- **Multiple Terrain Databases (TDBs)**

What We Need:

- **Expanded Capabilities**

AVCATT-A

Expanded Capabilities

- **Unmanned Aerial Vehicle (UAV) to Aircraft Interface**
- **Intransit (aboard ship) Training Capability**
- **Classified Operations**
- **Simulated Crew Chief Functions (UH-60 and CH-47)**
- **Voice Directed SAF**
- **Motion Cueing for Manned Modules**
- **Fixed Facility**
- **Mobile Power Source**

AVCATT-A

Acquisition Strategy

Subcontracting Opportunities May exist with the AVCATT-A Prime Manufacturer (L3COM)

AVCATT-A Concurrency

Concurrency Description/Requirement

What We Have:

Baseline AVCATT-A System With:

AH-64A Apache
AH-64D Longbow (Lot 4)
OH-58D Kiowa Warrior (CDS 2)
UH-60A/L Blackhawk
CH-47D Chinook

What We Need:

Aircraft Concurrency

Technical Concurrency (Prevent Technical Obsolescence)

AVCATT-A Concurrency

Acquisition Strategy

Acquisition Strategy Is Not Yet Established and May Be Different For Different Requirements

Subcontracting opportunities may exist with the AVCATT-A Prime manufacturer L3 Communications (L3); and/or Government May Initiate Separate Contracts for Specific Capabilities.

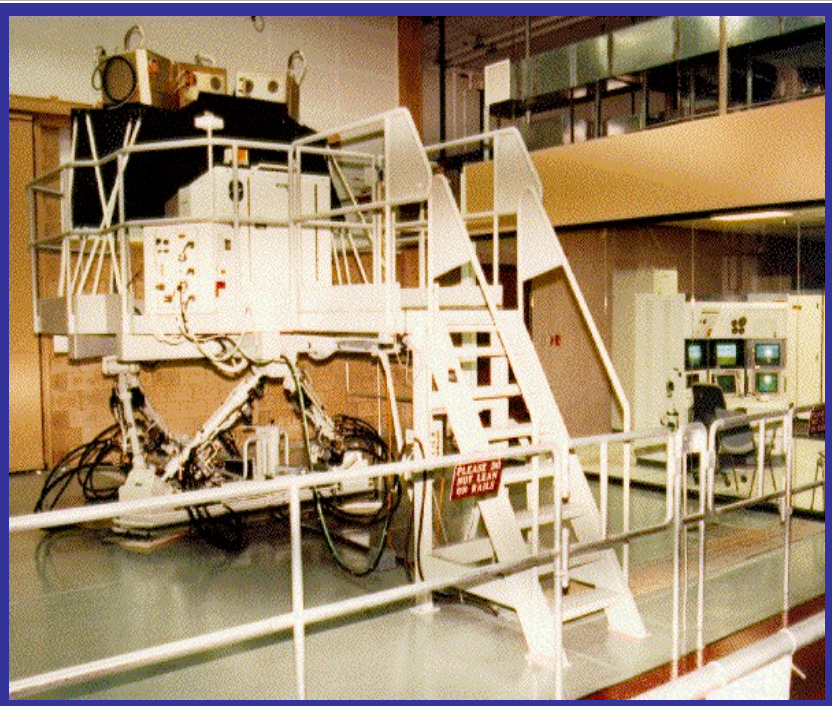
Product Manager

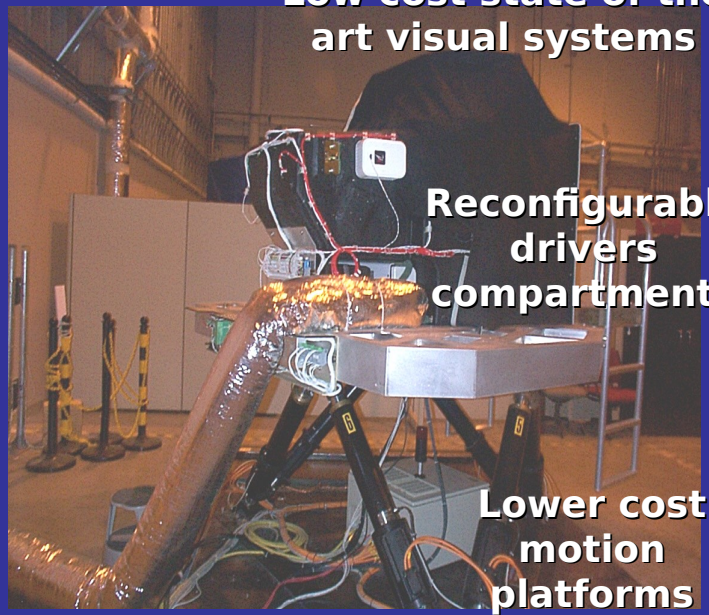
Ground Combat Tactical Trainers

PM GCTT

Develop, Field, and Sustain High Quality Ground Combat Virtual Training Devices that Meet or Exceed our Fighters' Requirements

Common Driver Training System (CDTS)





Provide a driving training capability at the institutional and unit level. Leverage prior developed systems with possible interoperability with other training systems. Possibility of both no-motion and motion based simulators. Contract

Common Driver Training System (CDTS)

Description/Requirement

WHAT WE HAVE

20 M1 and M1A2 SEP tank driver trainers for Ft. Knox, KY

17 wheeled vehicle driver trainers for Ft. Leonard Wood, MO.

WHAT WE NEED

Combined common driver training acquisition:

- Leverage Economies of Scale

- Exploit Common Architecture

- Lower per system cost

Common Driver Training System (CDTS)

Acquisition Strategy

- Dependant upon front end business case analysis to be performed in FY 03
- Competitive procurement (potential for multiple awards)
- 80% commonality

Contract: STOC

Value: $15-150M

RFP: 1QFY04

CA: 2QFY04

Virtual Emergency Response Training System (VERTS)

Provide an exercise support capability for Emergency Responders and the Incident Command System (ICS) on military installations and for military responders that provide support to civil authorities.

Virtual Emergency Response Training System (VERTS)

Description/Requirement

WHAT WE HAVE

No current capability is available to train the military installation “First Responder” and “Incident Commander”.

WHAT WE NEED

Exercise Support Capability for “First Responders” and “Incident Commanders” on military installations and for the military first responders that provide support to civil authorities under the

Virtual Emergency Response Training System (VERTS)

NBC Survey Team

Reconfigurable Vehicle Simulator (x2)

Desktop Station (x10)

Joystick

Desktop HITL Simulator

Immersive Station (x2)

Immersive HITL Simulator

Sensors

Display

Speakers

Speaker

Projection System

Speaker

Screen

Screen

Projector

Projector

HLA/DIS 2.04 LAN

(GB Ethernet, UWB, etc)

Monitor

Monitor

VERTS SAF / Logger

Desktop Stealth

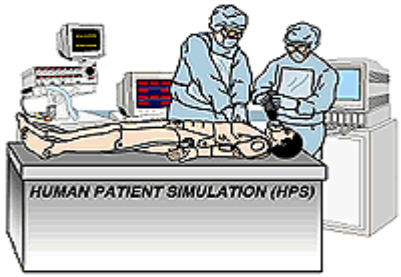
Exercise Controller (Battle Master Mode)

Stealth Mode

Joystick

Joystick

Battlemaster Station



Medical Simulator (x2)

Monitor

Monitor

VERTS SAF / Logger

Desktop Stealth / HITL

Joystick

Joystick

AAR Station

Virtual Emergency Response Training System (VERTS)

Acquisition Strategy

- "First Responder" & "Incident Commander" training capability
- Homeland Defense mission training capability (Civil Support Teams (CST))
- Leverage and integrate the Integrated MOUT Training System (IMTS)

Contract: TBD

Value: $2M - 150

RFP: TBD

CA: TBD

Basic Electronic Maintenance Trainer (BEMT)

Provide highly realistic training through training scenarios, which require the students to perform basic electronics tasks. Trainers consist of a computerized instructional device with the capability for computer-based

Basic Electronic Maintenance Trainer (BEMT)

Description/Requirement

WHAT WE HAVE

Antiquated Electronic Maintenance Training Systems at:

- Ordnance Missile & Munitions Center/School, Redstone Arsenal, AL
- Maintenance Training Dept -

WHAT WE NEED

State-of-the-Art Maintenance Training Systems and Techniques, Such as Computerized Instruction and Scoring

Basic Electronic Maintenance Trainer (BEMT)

Acquisition Strategy

- Market Survey to Investigate Potential Sources
- Contracting Strategy Is Dependent Upon Results of Market Survey

Contract: TBD

Value: < $5M

RFP: 1QFY04

CA: 1QFY04

PM GCTT Future Initiatives

- **Establishment of the Virtual Training Device Working Group (VTDWG)**

- **Future Combat Systems (FCS) Training Aides, Devices & Simulations and Simulators (TADSS)**

- **Homeland Defense/ Security TADSS**

--- Additional Information --- Project Discussion Opportunities

Purpose: Provide Forum For Additional Discussion And Responses to Areas of Specific Interest

Location: PEO STRI/Research Commons; Room 4072

For Attendance Contact: Jane Knapp, (407) 384-3601

When: Friday, 13 June 2003; Times as Indicated

APM CCTT 0800-0900APM STS 0900-1000
APM ACTT 1000-1100PM GCTT 1100-1200

PM CATT Points of Contact

The Contracting Officer is POC for Programs in Solicitation Phase

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COL Kevin S. Noonan, PM	**(407) 384-3600**
Mr. Patrick Spangler, DPM	**(407) 384-3602**
PM ACTT	
LTC Allen Borgardts, PM	**(407) 384-5140**
Mr. Bernie Gajkowski, DPM	**(407) 384-5175**
PM GCTT	
LTC Joseph Giunta, PM	**(407) 384-5160**
Mr. Robert Raisler, DPM	**(407) 384-5162**

Facing the
Future...
...Together